

Application No.: 10/674999

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Amendments to the Claims:

The following Listing of Claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Twice Amended) A composition for forming an insulating layer, the composition comprising:

a mixture comprising surface modified inorganic nanoparticles present in an amount of 5 to 95 percent by weight of the mixture dispersed in polymethylsilsesquioxane present in an amount of 5 to 95 percent by weight of the mixture, wherein the surface modifier comprises a carboxylic acid, a carboxylic acid derivative, a silane, or mixtures thereof;

a solvent; and

one or more optional additives,

wherein the composition has a viscosity suitable for applying the composition using a digital printing technique.

2. (Original) The composition of claim 1, wherein the composition has a viscosity of 1 to 100,000 centipoise measured using continuous stress sweep, over shear rates of 1 s^{-1} to 1000 s^{-1} .

3. (Original) The composition of claim 1, wherein the composition has a viscosity suitable for ink jet printing.

4. (Original) The composition of claim 3, wherein the composition has a viscosity of 1 to 40 centipoise measured using continuous stress sweep, over shear rates of 1 s^{-1} to 1000 s^{-1} .

5. (Original) The composition of claim 1, wherein the nanoparticles comprise one or more of silica, zirconia, and alumina particles.

6. (Previously Cancelled).

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7. (Cancelled).
8. (Currently Amended) The composition of claim 71, wherein the carboxylic acid derivatives comprise hexanoic acid or 2[-2-(2-methoxyethoxy)ethoxy] acetic acid.
9. (Currently Amended) The composition of claim 71, wherein the silanes comprise methyltriethoxysilane, methyltrimethoxysilane, isobutyltriethoxysilane, isobutyltrimethoxysilane, isooctyltriethoxysilane, isooctyltrimethoxysilane, or mixtures thereof.
10. (Original) The composition of claim 1, wherein the nanoparticles have an average size of 1 to 500 nanometers.
11. (Original) The composition of claim 1, wherein the nanoparticles have an average size of 5 to 125 nanometers.
12. (Original) The composition of claim 1, wherein the one or more optional additives are present in an amount of 0 to 60 percent by weight of the composition after evaporation of substantially all the solvent.
13. (Original) The composition of claim 1, wherein the one or more optional additives comprise an adhesion promoter.
14. (Original) The composition of claim 13, wherein the adhesion promoter comprises polyethyloxazoline.
15. (Original) The composition of claim 13, wherein the adhesion promoter is present in an amount of 0 to 5 percent by weight of the composition after evaporation of substantially all the solvent.

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16. (Currently Amended) A composition for forming an insulating layer, the composition comprising:

a mixture comprising surface modified inorganic nanoparticles present in an amount of 5 to 95 percent by weight of the mixture dispersed in polymethylsilsequioxane present in an amount of 5 to 95 percent by weight of the mixture;

a solvent; and

an additive comprising ~~The composition of claim 1, wherein the one or more optional additives comprise~~ one or more tetraalkoxysilanes and alkyltrialkoxysilanes,

wherein the composition has a viscosity suitable for applying the composition using a digital printing technique.

17. (Original) The composition of claim 16, wherein the alkoxysilanes are selected from the group consisting essentially of tetraethoxysilane, tetramethoxysilane, methytriethoxysilane, and methyltrimethoxysilane.

18. (Original) The composition of claim 16, wherein the one or more tetraalkoxysilanes and alkyltrialkoxysilanes are present in an amount of 0 to 50 percent by weight of the composition after evaporation of substantially all the solvent.

19. (Original) The composition of claim 1, wherein the one or more optional additives comprise a flexibilizer.

20. (Currently Amended) A composition for forming an insulating layer, the composition comprising:

a mixture comprising surface modified inorganic nanoparticles present in an amount of 5 to 95 percent by weight of the mixture dispersed in polymethylsilsequioxane present in an amount of 5 to 95 percent by weight of the mixture;

a solvent; and

an additive comprising a flexibilizer comprising ~~The composition of claim 19, wherein the flexibilizer comprises~~ one or more of dialkyldialkoxysilanes and trialkylmonoalkoxysilanes,

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wherein the composition has a viscosity suitable for applying the composition using a digital printing technique.

21. (Original) The composition of claim 20, wherein the one or more dialkyldialkoxysilanes and trialkylmonoalkoxysilanes are selected from the group consisting essentially of dimethyldiethoxysilane, dimethyldimethoxysilane, trimethylethoxysilane, and trimethylmethoxysilane.
22. (Original) The composition of claim 19, wherein the flexibilizer is present in an amount of 0 to 40 percent by weight of the composition after evaporation of substantially all the solvent.
23. (Currently Amended) A composition for forming an insulating layer, the composition comprising:
a mixture comprising surface modified inorganic nanoparticles present in an amount of 5 to 95 percent by weight of the mixture dispersed in polymethylsilsesquioxane present in an amount of 5 to 95 percent by weight of the mixture;
a solvent; and
an additive comprising ~~The composition of claim 1, wherein the one or more optional additives comprise~~ an organic acid,
wherein the composition has a viscosity suitable for applying the composition using a digital printing technique.
24. (Original) The composition of claim 23, wherein the organic acid comprises acetic acid, methoxyethoxyacetic acid, hexanoic acid, or mixtures thereof.
25. (Original) The composition of claim 23, wherein the organic acid is present in an amount of 0 to 3 percent by weight of the composition after evaporation of substantially all the solvent.
26. (Original) The composition of claim 1, wherein the solvent comprises an alcohol, a ketone, an ether, an acetate, or mixtures thereof.

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27. (Cancelled).
28. (Cancelled).
29. (Cancelled).
30. (Cancelled).
31. (Previously Cancelled).
32. (Previously Presented) A touch activated user input device comprising:
a substrate comprising a resistive layer in an active area of the user input device; and
an insulating layer disposed at least over a portion of the resistive layer, the insulating layer comprising polyorganosilsesquioxane.
33. (Original) The touch activated user input device of claim 32, wherein the insulating layer further comprises inorganic nanoparticles.
34. (Original) The touch activated user input device of claim 32, wherein the substrate comprises glass or plastic.
35. (Previously Presented) The touch activated user input device of claim 32, wherein the substrate comprises polyethylene terephthalate.
36. (Previously Presented) The touch activated user input device of claim 32, wherein the substrate further comprises conductive traces.
37. (Previously Presented) The touch activated user input device of claim 36, wherein the insulating layer extends over the conductive traces.

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38. (Original) The touch activated user input device of claim 32, wherein the insulating layer is deposited as a protective coat over a linearization layer.

39. (Previously Presented) The touch activated user input device of claim 32, wherein the insulating layer forms a hard coat.

40. (Original) The touch activated user input device of claim 36, wherein the conductive traces comprise a conductive polymer.

41. (Previously Presented) The touch activated user input device of claim 37, wherein the insulating layer over the conductive traces is substantially free of pinholes.

42. (Previously Cancelled).

43. (Original) The touch activated user input device of claim 32, wherein the insulating layer comprises at least 10 percent by weight polymethylsilsesquioxane.

44. (Original) The touch activated user input device of claim 32, wherein the insulating layer comprises from 10 to 95 percent by weight polymethylsilsesquioxane and from 5 to 90 percent by weight inorganic nanoparticles.

45. (Original) The touch activated user input device of claim 32, wherein the insulating layer is substantially stable at a temperature of 500 °C.

46. (Cancelled).

47. (Cancelled).

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48. (Cancelled).
49. (Cancelled).
50. (Previously Cancelled).
51. (Cancelled).
52. (Previously Cancelled).
53. (Cancelled).
54. (Cancelled).
55. (Cancelled).
56. (Previously Presented) The touch activated user input device of claim 32, wherein the resistive layer comprises a conductive polymer.
57. (Previously Presented) The touch activated user input device of claim 32, wherein the resistive layer comprises a transparent conductive oxide.
58. (Previously Presented) The touch activated user input device of claim 32, wherein the resistive layer is continuous.
59. (Previously Presented) The touch activated user input device of claim 32, wherein the resistive layer is discontinuous.